a regulatory sequence that promotes expression of the DNA sequence encoding the polypeptide of interest;

wherein the bovine or a female descendant of the bovine is disposed to express the construct in mammary secretory cells such that the polypeptide of interest is detectable in milk produced by the bovine or a female descendant thereof.

119. The method of claim 118, further comprising obtaining milk from the chimeric bovine or female descendant ~~comprising the polypeptide of interest~~.

120. A bovine whose mammary gland cells have a genome comprising in operable association:

a DNA sequence encoding a signal sequence functional in bovine mammary gland secretory cells; ~~and~~

a DNA sequence encoding a polypeptide of interest; and

a regulatory sequence that promotes expression of the DNA sequence encoding the polypeptide in the mammary gland;

wherein the ~~transgenic~~ bovine or a female descendant of the ~~transgenic~~ bovine is disposed to express the transgene in mammary secretory cells such that the polypeptide of interest is detectable in milk produced by the ~~transgenic~~ bovine or a female descendant of the ~~transgenic~~ bovine;

wherein the polypeptide is a ~~bovine protein undetectable in milk of a natural bovine, or a~~ heterologous polypeptide.

Remarks

Support for the recital of a regulatory sequence in claim 114 is provided at e.g., p. 17, line 13. Claim 114 has also been amended to recited "disposed to express" rather than simply "expresses" because protein expression in milk does not occur continuously throughout the life of a calf, but only when the calf is lactating. Claim 18 is directed to methods for preparing bovines having a construct in at least some cells, the claim being generic to transgenic and chimeric or mosaic bovines. Likewise, claim 120 is intended to be generic to

Applicant's request to substitute the originally filed Figure 1 with Figure 1 A-G in the preliminary amendment filed March 15, 1999, paper #7 and in paper #8, filed March 15, 1996 is accepted based on support from greatgrandparent application USSN 07/619,131.

The following is an examiner's statement of reasons for allowance:

The claimed invention is free of the prior art of record because the prior art of record does not teach and enable a trangenic or chimeric bovine.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen M. Hauda whose telephone number is (703) 305-6608.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian R. Stanton, may be reached at (703) 308-2035.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-2801.

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1632.

Papers related to this application may be submitted to Group 160 by facsimile transmission. Papers should be faxed to Group 160 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center number is or (703) 305-3014 or (703) 308-4242.

Karen M. Hauda

Karen M. Hauda
Patent Examiner

6